

May 13, 1956

Dr. John R. Shaver  
Division of Biology  
California Institute of Technology  
Pasadena 4, California

Dear Dr. Shaver:

Thank you for sending me the manuscript of your paper on mitochondria in development. We surely need as many more quantitative studies as can be devised along these lines. One possible technical suggestion: to homogenize your cells by injecting from the syringe under oil, or with an antifoaming agent, to reduce losses from foaming. Does the number of times the procedure is repeated affect the yield?

As you may gather from my review, I am rather sceptical of the evidence that mitochondria are genetic plasmids, but the direct approach of your earlier experiments seems the only likely one. LeClerc's experiments are entirely unconvincing, for the reasons cited in Brachet's discussions of your experiments (e.g. in the Soc Exp Biol Symp 6), and because the effects are so small that the stability of the absolute enzyme measurement can be questioned. However, mitochondria from different organs appear to be enzymatically differentiated, and this might be a basis for experiments with specificity controls.

The last time we talked together if I remember rightly was at the Woods Hole almost 10 years ago; is there any likelihood of seeing you there again this summer?

Please give my regards to Dr. Tyler, and if you see him especially to Stevie.

Yours sincerely,

Joshua Lederberg